



CERTIFIED AGGREGATES APPROVED PRODUCER PROGRAM

GENERAL

This IM deals with requirements for furnishing certified aggregate and the approved producer program.

In order to furnish certified aggregates to projects, an aggregate producer shall be on the approved aggregate producer listing (Appendix B, attached). This will also apply to recycled product yards and/or processors. The specific requirements, including the details of the required quality control program are in Appendix A (attached).

Specification limits for aggregates being produced are found in Appendix C and D. For complete details on aggregate quality and gradation requirements, refer to the appropriate referenced specification.

Non-compliance to the approved Producer Quality Control Program shall constitute grounds for the source and/or producer to be placed on conditional status by the District Materials Engineer. Continued non-compliance will be considered sufficient grounds to remove the producer from the Approved Producer List.

An Aggregate Review Board will meet, as needed, for disciplinary actions and appeals involving approved producers.

The Aggregate Review Board shall consist of:

- The State Materials Engineer
- The Chief Materials Geologist

The prime contractor or a contractor-authorized representative (the producer) shall be responsible for source product quality control.

Aggregate source testing will be performed and documented in accordance with this Instructional Memorandum by persons qualified in accordance with the provisions of IM 213.

The tests will be called certified tests and the aggregate represented will be called certified aggregate.

Source gradation tests will be considered advisory when the aggregate being produced is intended for use in either HMA or PCC mixtures. The acceptance testing of these aggregates will be performed on the project in accordance with IM 204. For all other materials, production gradation tests may be considered the basis of acceptance.

The minimum frequency of gradation tests at the source for aggregates being produced for use in HMA or PCC mixtures shall be 1/1500 tons during production. For all other production, the minimum rate of sampling and testing at the time of production shall be 1/3000 tons.

Sampling and testing duties described in this Instructional Memorandum shall not be delegated to non-certified technicians.

SAMPLING, TESTING & DOCUMENTATION

Gradation sampling, testing, and documentation of certified aggregates, at the source, shall be the responsibility of the aggregate producer or supplier. Quality sampling, testing, and documentation of certified aggregates shall be the responsibility of the IDOT Area Inspector.

Certified source testing shall be performed at frequencies as outlined in this IM utilizing the procedures contained in Office of Materials IM Series 300. Additional certified gradation testing may be required at the time material is shipped to a project, for a stockpiled material carried through a winter season, or if there is evidence of segregation, contamination, or degradation. When additional certified testing of stockpiled material is required, the testing shall be at a frequency of at least one per 6000 Mg (tons). Bins or other means of securing representative samples shall be furnished for the sampling of stockpiled material.

Source quality will be determined by testing samples secured by District Materials personnel. This will not relieve the producer or supplier of their responsibility for quality of the material. It is recommended that a Producer Quality Control Program include quality control testing to assist with ledge control and pit quality. Such tests may include: specific gravity (IM 307), clay lumps and friable material (IM 368), or shale in fine aggregate (IM 344).

If historic data from a source indicate that quality test results approach or exceed specification limits the engineer may require specific data be provided by the aggregate producer or supplier to the IDOT (obtained by qualified persons and procedures). These data may include those tests listed above. When required, the additional quality control testing shall be at a minimum frequency of one sample per 12,000 ton or one sample per month whichever provides the higher frequency of testing.

The quality of the material produced shall be determined before shipment to a project.

Not less than 24 hours before start up, or as soon as possible for a production change, the appropriate District Materials Engineer shall be notified. The notification shall include the estimated daily production and total production, the intended use (project or warehouse stock), production ledge(s) if applicable, and responsible person(s). Failure to notify may result in additional quality sampling and testing, or rejection of the material.

All producer test results performed on certified aggregates, whether compliant or non-compliant, shall be promptly reported to the District Materials Engineer on Form #821278. These reports shall indicate whether the aggregate is being produced for direct project delivery, stockpiling for a specific project, or for advance warehouse stock.

Selected production limits shall be included on Form #821278.

Production limits for aggregate produced for use in HMA or PCC mix designs are generated by the contractor and supplied to the aggregate producer on Forms #955 and #955QMC respectively.

CERTIFIED AGGREGATE DELIVERY DOCUMENTATION

Documentation may be accomplished by numbered truck ticket, transfer list or shipment statement (such as Form #821278), or by a bill of lading (for rail or barge shipments). The certified documentation shall be furnished to project inspection personnel or receiving contractor before material is incorporated.

- For aggregates as bid items measured by weight (mass), the certified truck tickets shall be numbered and include signatures or initials in accordance with Article 2001.07.
- In the case of shipment by rail or barge, the documentation shall be sent to the project engineer and receiving contractor or ready mix operator no later than the same day as shipment source departure. The documentation shall include the rail car or barge number(s).
- Documentation not having an exact weight (mass) shall include an estimated quantity (i.e. transfer listings or Form #821278, etc.).
- Summary quantity documentation shall also be provided for non-proportioned aggregates. The summary documentation shall be signed, include the type of material and source, the total quantity, and the project number.

The following certification statement is required to be on the document used to certify the material being delivered (i.e. truck ticket, Form #821278, etc.): **"This is to certify the material herein described meets applicable contract specifications."** **NOTE:** This certification statement shall be signed or initialed by an authorized representative of the aggregate supplier.

To ensure proper identification of delivered aggregates, the following additional information is required on the certification document:

Proportioned Aggregate:

PCC Aggregate: Gradation number, quantity, source name or T203 A-number, production beds (for quarried stones) and the delivery date. **NOTE:** For aggregate being delivered for use in a Concrete Design Mixture (CDM), the product size is required in lieu of the Iowa DOT gradation number.

HMA Aggregate: Product size, quantity, source name or T203 A-number, production beds (for quarried stones), the delivery date and project number. **NOTE:** The project number is preferred when practical, as in the case of shipping to a paving plant site, but not required when shipping to a plant or ready mixed concrete plant supplying material to multiple projects.

Non-proportioned Aggregate

Iowa DOT gradation number, project number, quantity, source name or T203 A-number and the delivery date. **NOTE:** Documentation for revetment stones shall include production beds.

MONITORING OF CERTIFIED AGGREGATES

The District Materials Office will be responsible for monitoring of sampling and testing of aggregates for gradation by the certified technician.

Monitor inspection samples are secured from aggregate being produced for a project, reserved stockpiles or stockpiles for intermittent project usage.

Monitor Sampling for Quality Testing shall be performed at the following minimum frequency:

- One per 12,000 Mg (tons)
or
- If monthly production is greater than 12,000 Mg (tons), the minimum sampling frequency is one per month.

Monitor sampling for Gradation Testing may be independent samples or proficiency (split-bucket) samples for comparison testing in accord with IM 216. Sampling shall be performed at the following minimum frequency:

- Proportioned aggregates: one per 18,000 Mg (tons) representing the various products made.
- Non-proportioned aggregates: one per 36,000 Mg (tons) representing the various products made.

NOTE: the District Materials Engineer may adjust these sampling frequencies. Monitoring of certified gradation testing may be waived when a product quantity is less than 2000 Mg (tons).

Periodic evaluation of certified technicians will be performed by the District Materials Representative and kept on file. Correlation (split-bucket) sample results will be compared per IM 216.

At no time will the District Materials Office representative issue directions to the producer. However, the representative will have authority and responsibility to question and where necessary reject any operation, which is not in accordance with the Specifications, Special Provisions, and Instructional Memorandums.

REHANDLING OF CERTIFIED AGGREGATES

When certified aggregates are rehandled the District Materials Engineer shall be notified and afforded the opportunity to monitor the re-handling procedure.

For the purpose of this IM, re-handling is meant to include the physical unloading and reloading of aggregate at a temporary storage site before the aggregate is delivered to its final destination. Rehandled certified aggregates may be required to be re-tested, with or without re-weighing, and recertified on a numbered shipment ticket with proper identification and certification statement.

ACCEPTANCE

In the case of HMA or PCC proportioned aggregates, acceptance tests will be performed on samples obtained at the proportioning plant

Certified aggregate may be incorporated into a project on the basis of the certified truck ticket, certified bill of lading, shipment listing, certified transfer listing or Certified Gradation Test Report (Form #821278). When the material represented is non-proportioned aggregate, the project number must be on the certified document and a copy furnished for project inspection personnel. When the aggregate represented is HMA or PCC proportioned aggregate, the project number is preferred when practical, as in the case when shipping to a paving plant site, and not required when impractical, as in the case when shipping into warehouse stock at a ready mix plant. A file of certified shipment or transfer documents for the HMA or PCC proportioned aggregate will be maintained by the contractor or ready mix operator and made available for inspection at each plant or project site during the project period. Project inspection personnel shall verify that all material incorporated in the project is properly certified and document this verification and quantity on each of the appropriate daily or periodic construction reports. No other project documentation for the incorporated aggregate is required.

Documentation procedures for asphalt and concrete paving plants that have multiple project and commercial mix responsibilities would function in the same manner as described above for ready mix plants.

Acceptance of non-proportioned aggregates will be based on proper certification and on visual examination by the contracting authority to ensure against obvious contamination or segregation.

Minor quantities of non-critical aggregates may be visually inspected by the contracting authority and recorded in the project field book. Quantities less than 200 Mg (ton) are considered minor. An example of a non-critical aggregate is a non-proportioned aggregate such as granular backfill material for bridge abutments.

PRODUCTION OF CERTIFIED AGGREGATE FROM RECLAIMED ROADWAY MATERIAL

General Processing Requirements for All Aggregates Produced from Reclaimed Materials

Notification to District Materials Personnel of new production, as well as testing frequency, sampling, documentation, and acceptance of recycled materials, are the same as for virgin materials as outlined in this IM. The District Materials Engineer shall be afforded the opportunity to witness the stockpiling of unprocessed recycled material.

Processing of reclaimed PCC, RAP, or CCP shall include a means of eliminating material other than PCC, RAP, or CCP in the finished product. This may be accomplished by pre-screening or other methods acceptable to the District Materials Engineer. Stockpiles contaminated with reinforcing steel, soil, or other matter not allowed by the Specifications can be rejected upon visual inspection. The Producer or Contractor shall be informed immediately that the stockpile has been rejected. Recycled yards must have controlled access and delivered material shall be inspected prior to incorporation into unprocessed stockpiles.

Some aggregate products allow the blending of RAP with virgin aggregate or crushed PCC. The virgin aggregate or crushed PCC shall meet the gradation and quality requirements of the intended product before blending with RAP. RAP shall be processed to meet the applicable nominal maximum size for the intended product before blending with other aggregate. Blending shall be accomplished by the use of belt feeders and bins equipped with adjustable gates or drive systems that can be calibrated and controlled. For modified subbase and granular shoulders, the amount of recycled HMA from composite pavement and RAP shall not exceed 50%. The intended proportions shall be provided to the District Materials Engineer at least 24 hours before the start of production. The District Materials Engineer shall be afforded the opportunity to witness the calibration of the blending equipment.

Granular Subbase & Modified Subbase from Reclaimed Materials

These products require that the reclaimed material be identifiable and the following shall apply:

- Recycled crushed PCC pavement, crushed composite pavement (CCP), and salvaged HMA (RAP) can be reclaimed from an Interstate or Primary roadway pavement under the jurisdiction of the Contracting Authority and shall be certified based on gradation testing.

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- Recycled PCC roadway pavement or recycled composite roadway pavement obtained from secondary roads or municipal streets may be used if the source of the aggregate is known and the PCC coarse aggregate durability is Class 2 or better and shall be certified based on gradation testing. The Producer shall be responsible for documentation of the pavement source.
 - When the source or quality of the material from the secondary or municipal pavement is unknown, the material shall be certified based on quality requirements identified in the Standard Specifications for crushed stone for the aggregate being produced and gradation requirements for the aggregate product.
 1. If the concrete originated from multiple locations, the crushed material must be stockpiled in separate but homogeneous stockpiles.
 2. Prior to certification and furnishing to projects, each stockpile must be readily identifiable, and have complying results on applicable tests on samples taken from each of these stockpiles.